

the form of the protoplax is variable and the sculptured portion often very irregular or obsolete; callum round and tumid. Length, 9-17 mm.

New York to Florida, Cuba and Texas. Tottenville, Staten Island, burrowing in oyster shells (Tryon).

Although the figure given by d'Orbigny lacks the protoplax, the raised callus border surrounding it is clearly defined, while his description of the protoplax—"Ovato-oblonga, antice producta, acuta uncinata, postice dilatata angulata," agrees with what has been considered *D. smithii*. During my residence at St. Augustine (1880-87), I found a large number of fine specimens in a piece of soft artificial limestone off the water battery of Fort Marion. In my list of the shells of St. Augustine (THE NAUTILUS IV, 4) I confused this with *M. cuneiformis*. This species has only been recorded from shells and limestone while *M. striatus* and *cuneiformis* are more frequently found in wood. Its occurrence as far north as New York is probably accidental.

NOTE ON THE NOMENCLATURE OF THE SNAILS USUALLY CALLED PUPA.

BY T. D. A. COCKERELL.

Since it appears that the name *Pupa* is not applicable to the snails usually known as *Pupa muscorum*, *blandi*, etc., it becomes necessary to determine what generic name they are entitled to. Mr. B. B. Woodward has placed them in *Jaminia*, Risso, 1826, of which he regards *Pupilla*, Leach, as a synonym. A study of Dr. Dall's paper in NAUTILUS, 1904, p. 114, convinced me that this conclusion was not unassailable, and with the help of additional information very kindly supplied by Dr. Dall, I have decided to my own satisfaction in favor of *Pupilla*. The argument is as follows:

1. *Jaminia*, Risso, 1826, contained species afterwards referred to *Alæa* (1830), *Abida* (1831), *Pupilla* (1831), *Eucore* (1837), and *Sphyradium* (1837). The first species is *minutissima* Hartmann, but this does not agree with the generic diagnosis. The only figured species is an *Abida*, or *Eucore*.

2. *Alæa*, Jeffreys, 1830, contained among other things *edentula*, Draparnaud (now referred to *Sphyradium*) and *minutissima*, Hartmann. The latter is taken as the type by Dr. Dall (t. c., p. 115). Conchologically, *minutissima* has the characters of *Sphyradium*, and not at all those of *Vertigo*, *Pupilla*, etc. Its reference to *Sphyradium*

should be fortified by an examination of the jaw and lingual-membrane, but for my own part, I am satisfied that it belongs there. If this is confirmed, *Alæu* takes the place of *Sphyradium*, Agassiz, 1837.

3. *Abida*, Leach in Turton, 1831, has for its sole example and therefore type *Pupa secale*. *Eucore*, Agassiz in Charpentier, 1837, was proposed for *P. tridens* and *P. quadridens*. I do not think these can be regarded as different genera, but the characteristic European group of "*Pupa*" *secale*, *P. tridens*, *P. quadridens*, etc., surely deserves to rank as a valid genus, separate from the circumpolar group commonly known as *Pupa*, subg. *Pupilla*.

4. If *Alæa* = *Sphyradium*, and *Eucore* = *Abida*, all the species of *Jaminiæ* were provided for by 1831. If *Sphyradium* is distinct from *Alæa*, apparently the diagnosis of *Jaminiæ* prevents us from using that name for *Sphyradium*.

5. *Jaminiæ* is therefore either *Abida* or *Pupilla*, both published in the same work. *Abida* has in its favor the figured example; *Pupilla* has Mr. B. B. Woodward's decision. Apparently priority of place should decide the matter.

6. Dr. Dall informs me that in Turton *Pupilla umbilicata* is on p. 98, *P. marginata* (our *muscorum*) on p. 99; *Abida secale* on p. 101 as a synonym of *Vertigo secale* (Draparnand) Turton. Hence *Pupilla* was first removed, and *Jaminiæ* stands as the proper name for *Abida*, with *Eucore* as a section.

7. I do not think the status of *Pupilla* is affected if we regard *umbilicata* as its type, for I cannot imagine any one could place *umbilicata* and *muscorum* in different genera:

8. Our forms of *Pupilla* stand thus:

Pupilla muscorum (Linné).

b. *unidentata* (C. Pfr.).

c. *bigranata* (Rossm.).

Pupilla hebes (Ancey).

Pupilla blandi Morse.

b. *sublubrica* (Ancey).

c. *obtusa* (Ckll.).

d. *alba* (Ckll.).

Pupilla sonorana (Sterki).

b. *tenella* (Sterki).

Pupilla syngenes (Pilsbry).

b. *dextroversa* (Pils. & Van.).

Pupilla sterkioma (Pilsbry).